

**REMARKS**

Applicant thanks Examiner Hughes for the telephone conference on February 5, 2004 and for her thoughtful consideration of this case. This Application has been carefully reviewed in light of the final Office Action mailed December 31, 2003. To advance prosecution of this application, Applicant has responded to each notation by the Examiner. Applicant submits that all of the pending claims are allowable over the cited references. Applicant respectfully requests reconsideration and favorable action in this case.

**Subject Matter Indicated as Allowable**

Applicant notes with appreciation the Examiner's statement that Claims 38-51, 77-81 and 97-104 are allowed.

Applicant also appreciates the Examiner's notation that Claims 25, 28, 37, 53-55, 64, 76, 83-85, and 93 contain allowable subject matter and would be allowed if rewritten in independent form. Applicant respectfully declines that invitation at this time, as independent Claims 1, 29, 52, 72, 82, and 87 are believed to be patentable over the cited references.

**Interview Summary**

Applicant's attorney conducted a telephonic interview with Examiners Hughes on February 5, 2004. Pursuant to M.P.E.P. §713.04, Applicant submits this summary of the telephonic interview to record Applicant's understanding of the substance of the interview. If Applicant's understanding is inaccurate, notice of such is appreciated.

During the interview, Applicant and the Examiner discussed the Examiner's request for a mark-up of the present application showing the subject matter added. Applicant understands that the Examiner no longer requires a mark-up of the present application. Instead, as suggested by the Examiner, Applicant has cited to example sections of the parent application and parent patents to identify examples of support for the subject independent claims.

**Disqualified as Prior Art**

The present Patent Application is a Continuation-in-Part of and claims priority to U.S. Patent Application No. 09/719,591 by Islam et al. ("*Islam '591*") with a filing date of

December 12, 2000. In addition, the present Patent Application is a Continuation-in-Part of and claims priority to U.S. Patent No. 6,359,725 by Islam ("*Islam '725*") and U.S. Patent No. 6,335,820 ("*Islam '820*") by Islam, each having a filing date of December 23, 1999. Thus, a number of claims in the present Patent Application have an effective filing date of at least December 12, 2000 and/or December 23, 1999.

The Examiner provides that Applicant's arguments provided in the September 22, 2003 Response to Office Action relating to the disqualification of *Bolshtyansky* and *Bartolini* are not convincing because the parent applications and/or patents do not support a number of the claims listed above. *Office Action at 2*. In particular, the Examiner provides that "co-propagating pumps in a multi-stage Raman amplifier with both discrete and distributed amplifier modules is not supported." *Id.*

Contrary to the Examiner's assertion, Applicant's parent patents and parent patent application contain sufficient disclosure to support at least independent Claims 1, 29, 52, 67, 72, 82, 87, 96, and 97. To address the Examiner's particular example, Applicant provides that support for the concept of bi-directional pumping and/or co-pumping can be found at least in FIGURES 15b and 15c of the *Islam '591* patent application, which provide exemplary embodiments of a multi-stage hybrid amplifier having a distributed Raman amplifier fiber and a discrete amplifier stage. Moreover, the *Islam '591* patent application specifically teaches bi-directionally pumping the distributed Raman amplifier fiber. *See e.g., Page 41, Line 28 – Page 42, Line 9; See also FIGURES 15b and 15c*. Furthermore, FIGURE 8c of the *Islam '820* patent provides an exemplary embodiment of a multi-stage optical amplifier having a distributed Raman amplifier fiber and a discrete amplifier fiber or discrete amplifier stage. The *Islam '820* patent disclosure specifically provides that bi-directional pumping of the distributed Raman amplifier is permitted. *See e.g., Col. 7, Lines 18-22*.

Applicant provides the following list of citations to show where, in the parent application and/or parent patents, support for each independent claim can at least be found.

- a. Support for Independent Claim 1 can be found at least in:
  - FIGURES 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 6, Line 51 – Col. 7, Line 11 of *Islam '820*;

- FIGURES 15b and 15c of *Islam '591*;
  - Page 41, Line 28 – Page 42, Line 9 of *Islam '591*;
- b. Support for Independent Claim 29 can be found at least in:
- FIGURES 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 2, Lines 52-65 of *Islam '820*;
  - Col. 5, Lines 11-16 of *Islam '820*;
  - Col. 5, Lines 46-50 of *Islam '820*;
  - Col. 6, Line 51 – Col. 7, Line 11 of *Islam '820*;
  - FIGURES 15b and 15c of *Islam '591*;
  - Page 4, Lines 9-11 of *Islam '591*;
  - Page 19, Lines 24-26 of *Islam '591*;
  - Page 41, Line 28 – Page 42, Line 9 of *Islam '591*;
  - Page 42, Lines 24-25 of *Islam '591*;
- c. Support for Independent Claim 52 can be found at least in:
- FIGURES 1-7, 10, 11, and 15 of *Islam '820*;
  - Col. 4, Lines 47-48 of *Islam '820*;
  - Col. 4, Lines 52-56 of *Islam '820*;
  - Col. 5, Lines 1-10 of *Islam '820*;
- d. Support for Independent Claim 67 can be found at least in:
- FIGURES 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 6, Line 51 – Col. 7, Line 11 of *Islam '820*;
  - FIGURES 15b and 15c of *Islam '591*;
  - Page 41, Line 28 – Page 42, Line 9 of *Islam '591*;
- e. Support for Independent Claim 72 can be found at least in:
- FIGURES 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 2, Lines 52-65 of *Islam '820*;
  - Col. 5, Lines 11-16 of *Islam '820*;
  - Col. 6, Line 51 – Col. 7, Line 11 of *Islam '820*;

- FIGURES 15b and 15c of *Islam '591*;
  - Page 4, Lines 9-11 of *Islam '591*;
  - Page 41, Line 28 – Page 42, Line 9 of *Islam '591*;
- f. Support for Independent Claim 82 can be found at least in:
- FIGURES 1-7, 10, 11, and 15 of *Islam '820*;
  - Col. 4, Lines 47-48 of *Islam '820*;
  - Col. 4, Lines 52-56 of *Islam '820*;
  - Col. 5, Lines 1-10 of *Islam '820*;
- g. Support for Independent Claim 87 can be found at least in:
- FIGURES 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 6, Line 51 – Col. 7, Line 11 of *Islam '820*;
  - FIGURES 15b and 15c of *Islam '591*;
  - Page 41, Line 28 – Page 42, Line 9 of *Islam '591*;
- h. Support for Independent Claim 96 can be found at least in:
- FIGURES 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 2, Lines 52-65 of *Islam '820*;
  - Col. 5, Lines 11-16 of *Islam '820*;
  - Col. 5, Lines 46-50 of *Islam '820*;
  - Col. 6, Line 51 – Col. 7, Line 11 of *Islam '820*;
  - FIGURES 15b and 15c of *Islam '591*;
  - Page 4, Lines 9-11 of *Islam '591*;
  - Page 19, Lines 24-26 of *Islam '591*;
  - Page 41, Line 28 – Page 42, Line 9 of *Islam '591*;
  - Page 42, Lines 24-25 of *Islam '591*;
- i. Support for Independent Claim 97 can be found at least in:
- FIGURES 3, 8c, 10, 11, and 15 of *Islam '820*;
  - Col. 2, Lines 52-65 of *Islam '820*;
  - Col. 5, Lines 11-16 of *Islam '820*;

- Col. 5, Lines 46-50 of *Islam* '820;
- Col. 6, Line 51 – Col. 7, Line 11 of *Islam* '820;
- FIGURES 1, 15b and 15c of *Islam* '591;
- Page 4, Lines 9-11 of *Islam* '591;
- Page 19, Lines 1-22 of *Islam* '591;
- Page 41, Line 28 – Page 42, Line 9 of *Islam* '591;

The above-cited portions of Applicant's parent application and parent patents, along with the rest of Applicant's parent application and parent patents, provide sufficient disclosure to support at least independent Claims 1, 29, 52, 67, 72, 82, 87, 96, and 97. As provided in Applicant's September 22, 2003 Response to Office Action, the *Bolshtyansky* and *Bartolini* patents cited by the Examiner have filing and/or priority dates after the effective filing date of the present Patent Application. Therefore, Applicant respectfully submits that the *Bolshtyansky* and *Bartolini* patents can not be used to support a rejection of at least Claims 1, 29, 52, 67, 72, 82, 87, 96, and 97. Applicant respectfully requests reconsideration and favorable action in this case.

#### **Claim Rejections – 35 U.S.C. §102**

The Examiner has rejected Claims 1, 3-24, 26-27, 29-36, 67-71, 87-92, and 96 under 35 U.S. § 102(e) as being anticipated by U.S. Patent 6,456,426 issued to Bolshtyansky et al. ("*Bolshtyansky*"). Applicant respectfully traverses these claim rejections for the reasons discussed below.

##### **a. Independent Claims 1, 29, 67, and 72 are patentable over *Bolshtyansky***

Although Applicant believes that the *Bolshtyansky* patent is disqualified as prior art against Claims 1, 29, 67, and 72, Applicant submits that Claim 1 is patentable over *Bolshtyansky*. Among other features, independent Claim 1 recites, in part, "an amplifier including at least a distributed Raman amplifier fiber and a discrete amplifier fiber." In addition, Claim 1 recites that "the first pump signal traverses the distributed Raman amplifier fiber in a first direction and the second pump signal traverses the distributed Raman amplifier in a direction counter to the first direction."

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987); M.P.E.P. § 2131. In addition, "[t]he elements *must* be arranged as required by the claim." *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989); *In re Bond*, 15 U.S.P.Q. 2d 1566 (Fed. Cir. 1990); M.P.E.P. § 2131 (emphasis added). Each of the numerous references cited by the Examiner fails to disclose, teach, or suggest, either expressly or inherently, various limitations recited in Claim 1.

At the outset, the Examiner asserts that fiber coil 46 is a distributed Raman amplifier fiber having a first pump signal that traverses the distributed Raman amplifier fiber in a first direction and the second pump signal that traverses the distributed Raman amplifier in a direction counter to the first direction. *Office Action at 3-4*. Contrary to the Examiner assertion, fiber coil 46 of *Bolshtyansky* is not a distributed Raman amplifier fiber; rather fiber coil 46 of discrete gain stage 30 is a discrete gain fiber. *See e.g., Col. 4, Lines 55-58*. To the extent that *Bolshtyansky* discusses distributed Raman amplifier fibers, this discussion is limited to the transmission fiber of span 16 being used as a distributed Raman amplifier. In particular, *Bolshtyansky* specifically provides that the distributed Raman amplifier arrangement includes the transmission fiber of span 16 and Raman pump 32, and that discrete gain stages 30 include pumps 42 and fiber coils 46 (emphasis added). *See e.g., Col. 4, Lines 37-45; Col. 4, Lines 55-58*. Moreover, *Bolshtyansky* distinguishes between distributed Raman amplification and discrete amplification by providing that distributed Raman amplification occurs in the transmission fiber of span 16 and discrete amplification occurs in discrete gain stage 30. *See e.g., Col. 3, Lines 54-58*. In particular, *Bolshtyansky* provides that "[t]he amplifier configuration in FIG. 2 may be used to provide distributed Raman gain in span 16 and discrete gain (Raman gain, rare-earth-doped-fiber gain, both Raman and rare-earth-doped-fiber gain, etc.) in gain stages 30." *See e.g., Col. 5, Lines 24-27*.

As indicated above, the *Bolshtyansky* disclosure describes an amplifier that includes discrete gain stages 30 and a distributed Raman amplifier arrangement that includes the transmission fiber of span 16 and Raman pump 32. *Col. 4, Lines 37-57*. Nowhere does *Bolshtyansky* contemplate a first pump signal that traverses the distributed Raman amplifier fiber in a first direction and the second pump signal that traverses the distributed Raman

amplifier in a direction counter to the first direction. *See e.g., Col. 4, Lines 37-45.* To the extent that *Bolshtyansky* discusses co-pumping and counter-pumping an optical fiber, this discussion is limited to co-pumping and counter-pumping discrete fiber coils 46. Consequently, *Bolshtyansky* fails to teach or suggest an amplifier where the "first pump signal traverses the distributed Raman amplifier fiber in a first direction and the second pump signal traverses the distributed Raman amplifier in a direction counter to the first direction."

For at least these reasons, Applicant submits that *Bolshtyansky* fails to teach or suggest Claim 1. Applicant respectfully requests withdrawal of the rejection and full allowance of amended independent Claim 1 and all claims depending therefrom.

Applicant submits that independent Claims 29, 67, and 72 are patentable over *Bolshtyansky* for at least the reasons discussed above. Thus, Applicant respectfully requests withdrawal of the rejection and full allowance of Claims 29, 67, and 72 and all claims depending therefrom.

**b. Claims 87 and 96 are patentable over *Bolshtyansky***

Although Applicant believes that the *Bolshtyansky* patent is disqualified as prior art against Claims 87 and 96, Applicant submits that Claim 87 is patentable over *Bolshtyansky*. Among other features, independent Claim 87 recites, in part, "an amplifier including at least a distributed Raman amplifier fiber and a discrete amplifier fiber." In addition, Claim 87 recites "a first pump input port coupled to a first end of the distributed Raman amplifier fiber" and "a second pump input port coupled to a second end of the distributed Raman amplifier fiber, the first end being located closer to the signal input port than the second end."

*Bolshtyansky* fails to teach or suggest a number of elements of Claim 87. For example, nowhere does *Bolshtyansky* contemplate a first pump input port coupled to a first end of the distributed Raman amplifier fiber and a second pump input port coupled to a second end of the distributed Raman amplifier fiber. To the extent that *Bolshtyansky* discusses a first pump input port and a second pump input port coupled to an amplifier fiber, this discussion is limited to the pump input ports 44 of fiber coil 46. *See e.g., FIGURE 2.* As indicated above, the fiber coil 46 of *Bolshtyansky* is not a distributed Raman amplifier fiber; rather fiber coil 46 of discrete gain stage 30 is a discrete gain fiber. *See e.g., Col. 4, Lines 55-*

58. Consequently, *Bolshtyansky* fails to teach or suggest an amplifier having "a first pump input port coupled to a first end of the distributed Raman amplifier fiber" and "a second pump input port coupled to a second end of the distributed Raman amplifier fiber, the first end being located closer to the signal input port than the second end."

For at least these reasons, Applicant submits that *Bolshtyansky* fails to teach or suggest Claim 87. Applicant respectfully requests withdrawal of the rejection and full allowance of amended independent Claim 87 and all claims depending therefrom.

Applicant submits that independent Claim 96 is patentable over *Bolshtyansky* for at least the reasons discussed above. Thus, Applicant respectfully requests withdrawal of the rejection and full allowance of Claim 96 and all claims depending therefrom.

**Claim Rejections – 35 U.S.C. §103**

The Examiner has rejected Claims 52, 57-63, 65-66, 72-75, 82, 86, and 94-95 under 35 U.S. § 103(a) as being unpatentable over U.S. Patent 6,456,426 issued to Bolshtyansky et al. ("*Bolshtyansky*") in view of PCT WO 9842088 A1 issued to Grubb ("*Grubb*"). Applicant respectfully traverses these claim rejections for the reasons discussed below.

**a. Claim 72 is patentable over the cited references**

Although Applicant believes that the *Bolshtyansky* patent is disqualified as prior art against Claim 72, Applicant submits that Claim 72 is patentable over *Bolshtyansky* and *Grubb*. Among other features, independent Claim 72 recites, in part, "an optical fiber including at least a distributed Raman amplifier fiber and a discrete amplifier fiber." In addition, Claim 72 recites that "the first pump signal traverses the distributed Raman amplifier fiber in a first direction and the second pump signal traverses the distributed Raman amplifier in a direction counter to the first direction."

*Bolshtyansky* and *Grubb*, taken alone or in combination, fail to teach or suggest a number of elements of Claim 72. As indicated above, the *Bolshtyansky* disclosure describes an amplifier that includes discrete gain stages 30 and a distributed Raman amplifier arrangement that includes the transmission fiber of span 16 and Raman pump 32. *Col. 4, Lines 37-57*. Nowhere does *Bolshtyansky* contemplate a first pump signal that traverses the



distributed Raman amplifier fiber in a first direction and the second pump signal that traverses the distributed Raman amplifier in a direction counter to the first direction. *See e.g., Col. 4, Lines 37-45.* Consequently, *Bolshtyansky* fails to teach or suggest an amplifier where the "first pump signal traverses the distributed Raman amplifier fiber in a first direction and the second pump signal traverses the distributed Raman amplifier in a direction counter to the first direction."

The *Grubb* disclosure describes a multiple stage discrete optical amplifier where the pump signals propagate in a direction counter to the input signals. *See e.g., Abstract.* Nowhere does *Grubb* contemplate that a first pump signal traverses the distributed Raman amplifier fiber in a first direction and the second pump signal traverses the distributed Raman amplifier in a direction counter to the first direction. Consequently, *Grubb* fails to teach or suggest an amplifier where the "first pump signal traverses the distributed Raman amplifier fiber in a first direction and the second pump signal traverses the distributed Raman amplifier in a direction counter to the first direction."

For at least these reasons, Applicant submits that *Bolshtyansky* and *Grubb*, taken alone or in combination, fail to teach or suggest Claim 72. Applicant respectfully requests withdrawal of the rejection and full allowance of independent Claim 72 and all claims depending therefrom.

**b. Claims 52 and 82 are patentable over the cited references**

Although Applicant believes that the *Bolshtyansky* patent is disqualified as prior art against Claims 52 and 82, Applicant submits that Claims 52 and 82 are patentable over *Bolshtyansky* and *Grubb*. Among other features, independent Claim 52 recites, in part, "an optical fiber including a first Raman amplifier fiber and a second Raman amplifier fiber." In addition, Claim 52 recites that "a pump shunt coupled to the signal input port and the signal output port, wherein the pump shunt couples at least a portion of the one or more pump wavelengths  $\lambda_p$  between the first Raman amplifier fiber and the second Raman amplifier fiber."

"To defeat a patent under 35 U.S.C. § 103, "the prior art reference must teach or suggest all the claim limitations." *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991); M.P.E.P. §

706.02(j). Applicants respectfully submit that neither *Bolshtyansky* nor *Grubb*, taken alone or in combination, teach or suggest, either expressly or inherently, a number of elements of Claim 52.

For example, *Bolshtyansky* fails to contemplate a pump shunt that is coupled to a signal input port and a signal output port, where the pump shunt couples at least a portion of the one or more pump wavelengths between a first Raman amplifier fiber and a second Raman amplifier fiber. To the extent that *Bolshtyansky* discusses a pump shunts, this discussion is limited to coupling pump wavelengths between transmission fibers. *See e.g.*, Col. 8, Lines 33-45; *see also* FIGURE 8B. Consequently, *Bolshtyansky* fails to teach or suggest a multistage amplifier having "a pump shunt coupled to the signal input port and the signal output port, wherein the pump shunt couples at least a portion of the one or more pump wavelengths  $\lambda_p$  between the first Raman amplifier fiber and the second Raman amplifier fiber."

The *Grubb* disclosure describes a multi-stage optical amplifier having a Raman fiber amplifier first stage and a rare earth doped fiber amplifier second stage. *See e.g.*, *Abstract*. Nowhere does *Grubb* contemplate a pump shunt coupled to the signal input port and the signal output port, wherein the pump shunt couples at least a portion of the one or more pump wavelengths  $\lambda_p$  between the first Raman amplifier fiber and the second Raman amplifier fiber. To the extent that *Grubb* discusses a pump shunt, this discussion is limited to a pump shunt that couples pump wavelengths between a Raman amplifier fiber and a rare earth doped amplifier fiber. *See e.g.*, *Figure 1*; *see also* *Page 6, Lines 6-33*. Consequently, *Grubb* fails to teach or suggest a multistage amplifier having "a pump shunt coupled to the signal input port and the signal output port, wherein the pump shunt couples at least a portion of the one or more pump wavelengths  $\lambda_p$  between the first Raman amplifier fiber and the second Raman amplifier fiber."

Finally, the Examiner has not cited language in either reference or within information commonly known to those skilled in the art that provides the necessary motivation or suggestion to combine these two references. The M.P.E.P. sets forth a strict legal standard for finding obviousness based on a combination of references. According to the M.P.E.P., "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation

to do so found either explicitly or implicitly in the references themselves or in the knowledge [that was] generally available to one of ordinary skill in the art" at the time of the invention. M.P.E.P. 2143.01. The "fact that references can be combined or modified does not render the resultant combination [or modification] obvious unless the prior art also suggests the desirability of the combination" or modification. *Id.* (emphasis in original).

The governing Federal Circuit case law makes this strict legal standard even more clear.<sup>1</sup> According to the Federal Circuit, "a showing of a suggestion, teaching, or motivation to combine . . . prior art references is an essential component of an obviousness holding." *In re Sang-Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002) (quoting *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000)). "Evidence of a suggestion, teaching, or motivation . . . may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, the nature of the problem to be solved." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). However, the "range of sources available . . . does not diminish the requirement for actual evidence." *Id.* In *In re Dembiczak*, the Federal Circuit reversed a finding of obviousness by the Board of Patent Appeals and Interferences, explaining that proper evidence of a teaching, suggestion, or motivation to combine is essential to avoid impermissible hindsight reconstruction of an applicant's invention:

Our case law makes clear that the best defense against the subtle but powerful attraction of hind-sight obviousness analysis is *rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references*. Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.

175 F.3d at 999 (quoting *W.L. Gore & Assoc., Inv. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983)) (emphasis added) (citations omitted).<sup>2</sup>

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<sup>1</sup> Note M.P.E.P. 2145 X.C. ("The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references.").

<sup>2</sup> See also *In Re Jones*, 958 F.2d 347, 351 (Fed. Cir. 1992) ("Conspicuously missing from this record is any evidence, other than the PTO's speculation (if that can be called evidence) that one of ordinary skill in the herbicidal art would have been motivated to make the modification of the prior art salts necessary to arrive at" the claimed invention.).

In the present case, the Examiner is improperly using the Applicants' disclosure as a blueprint for piecing together various elements of *Bolshtyansky* and *Grubb*. As provided above, the mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Thus, the mere fact that the teachings of one reference would improve the teachings of another reference as asserted by the Examiner, does not provide the required suggestion to combine. The showing must be clear and particular. *See, e.g., C.R. Bard v. M3 Sys., Inc.*, 48 U.S.P.Q.2d 1225, 1232 (Fed. Cir. 1998). Without such independent suggestion, the art is to be considered as merely inviting unguided and speculative experimentation which is not the standard with which obviousness is determined. *Agmen Inc. v. Chugai Pharmaceutical Co., Ltd.*, 927 F.2d 1200 (Fed. Cir. 1991).

To reject Claim 1 under the proposed *Bolshtyansky-Grubb* combination, the Examiner has made conclusory "it would have been obvious" and "[a]n ordinary artisan would have been motivated" statements. For example, the Examiner has merely stated that "it would have been obvious" to make the proposed combination "to use a pump shunt for the advantage of providing excess pumping to the second stage of the optical amplifier." *Office Action at 6*. The Examiner has presented no evidence, however, that suggests or motivates the combination. It is improper for the Examiner to use hindsight having read the Applicant's disclosure to arrive at an obviousness rejection. *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988).

Consequently, a *prima facie* case of obviousness cannot be maintained with respect to Claim 52, as the Examiner has not show the requisite proof necessary to establish a suggestion or motivation to combine the cited references.

For at least these reasons, Applicant submits that *Bolshtyansky* and *Grubb*, taken alone or in combination, fail to teach or suggest Claim 52. Applicant respectfully requests withdrawal of the rejection and full allowance of independent Claim 52 and all claims depending therefrom.

Applicant submits that independent Claim 82 is patentable over *Bolshtyansky* in view of *Grubb* for at least the reasons discussed above. Thus, Applicant respectfully requests

withdrawal of the rejection and full allowance of Claim 82 and all claims depending therefrom.

**CONCLUSION**

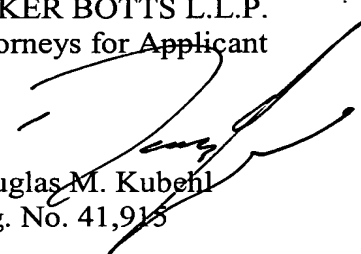
Applicant has made an earnest attempt to place this case in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests reconsideration and full allowance of all pending Claims.

Applicant believes that no fees are due, however, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

If the Examiner feels that a conference would advance prosecution of this Application in any manner, Douglas M. Kubehl stands willing to conduct such a telephone interview at the convenience of the Examiner. Mr. Kubehl may be reached at 214-953-6486.

Respectfully submitted,

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